REMARKS

This is a response to the Office Action mailed June 6, 2003. Claims 1 through 50 were pending in the present application when last examined and were rejected. No amendments to claims 1 through 50 are being entered herein and no new matter is being added. Claims 1 through 50 remain pending in the present application.

Rejection under 35 U.S.C. § 102(b) over
Kingberg

On pages 2 through 7 of the Office Action, the Examiner rejected Claims 1 – 4, 7 – 8, 10 – 13, 16 – 23, 26 – 31, 34 – 35 and 45 under 35 U.S.C. § 102(b) as being unpatentable over U.S. Patent No. 5,734,887 to Kingberg et al. ("Kingberg"). Applicant respectfully traverses.

The Examiner asserts in item 3 that Kingberg taught the invention substantially as claimed including: a) modeling a first plurality of information entities, including a first entity and a second entity, using a first logical model (Fig. 4, col. 6: lines 40 – 59), b) converting the logical model into a first derived subject model (col. 4: lines 57 - 58), c) converting the first derived subject model into a first physical model (col. 18: lines 43 – 46 and lines 60 – 62), and d) mapping at least one relationship between said first entity and said second entity of the first plurality of information entities based upon the first physical model (Fig. 4, col. 6: lines 59 – 67 and col. 7: lines 1 – 9). Applicants respectfully disagree.

Specific embodiments of the invention contemplate enabling a user to perform meta model driven analysis techniques to analyze information in a first schema database. Claim 1 is representative, and recites:

1.   A method for managing information, comprising:

modeling a first plurality of information entities, including a first entity and a second entity, using a first
   logical model;

converting said logical model into a first derived subject model;

converting said first derived subject model into a first physical model; and

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mapping at least one relationship between said first entity and said second entity of said first plurality of information entities based upon said first physical model.

Summary

Applicants respectfully submit that contrary to the Examiner's assertions, Kingberg: (1) fails to teach, suggest or disclose elements recited by the rejected claims; (2) actually teaches away from the present invention as to each of its problem and solution; and (3) would be rendered inoperable if used in the manner suggested by the Examiner's arguments.

1.   The Examiner fails to consider recited claim limitations.

The Examiner's assertions fail to consider recited claim limitations. To anticipate a claim, the reference must teach every element of the claim (MPEP § 2131). Kingberg fails to meet one or more of the recited limitations of the claimed embodiment including, "*modeling a first plurality of information entities, including a first entity and a second entity, using a first logical model*", "*converting said logical model into a first derived subject model*", "*converting said first derived subject model into a first physical model*" and "*mapping at least one relationship between said first entity and said second entity of said first plurality of information entities based upon said first physical model.*" Applicant's claimed embodiments contemplate abstract meta model driven data analysis.

Apparently the Examiner is equating Kingberg's "logical model" with Applicant's recited first logical model. Significant differences exist, however, between Applicant's claimed first logical model and the cited figure and passages of Kingberg. Specifically, Kingberg's conventional method REQUIRES the intervention of a database designer (Kingberg's so called "application developer") to prepare well-known entity relationship diagrams (Kingberg's so called "logical model") from which Kingberg' populates a database. The cited passage of Kingberg read:

Although there are many techniques for building entity relationship diagrams and creating logical data models and driving the logical data models down to physical

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database tables, the following entity relationship based technique works well with the present invention. The first step to creating a logical data model or to creating a physical database design is to develop an entity relationship diagram. In developing the entity relationship diagram the application developer identifies entity relationship types and associated attributes and also the primary key for each entity type. An entity is a thing, e.g. a person or an automobile, a concept, an organization, or an event of interest to the organization, and that which data is to be maintained. An entity type is a classification of an entity satisfying certain criteria. A relationship is an interaction between entities. A relationship type is a classification of relationships based on certain criteria. Usually, nouns in English correspond to entities, while verbs correspond to relationships. In the example shown in FIG. 4 there are four entity types: customer, payments, sales transaction and item. (Kingberg, col. 6: lines 40 – 59, emphasis added)

Applicant notes that Kingberg's use of entity relationship diagrams drawn by a database designer to formulate a data warehouse using a database design language (DDL) are conventional well known methods which cannot enable the objective of conceptual database analyses based upon an abstract data model. The cited passages of Kingberg (Kingberg, col. 18: lines 43 – 46 and lines 60 – 62), rather than teaching Applicant's recited "converting the first derived subject model into a first physical model," indicate instead the conventional database description language approach. These cited passages read:

> Use of entities, the relationships between them, and their corresponding attributes comprise a logical database design evolved in third normal form as a starting point. Once created, the logical data model is used to generate a physical data representation from which a database description may be produced via standard Database Description Language (DDL). (Kingberg, col. 18, lines 43 – 46, emphasis added)

Even if, arguendo, the Examiner's equating Kingberg's so called "logical model" with Applicant's "first logical model" is taken as correct, (a proposition with which Applicant STRONGLY disagrees), Kingberg still fails to teach, disclose, or even suggest the claimed limitations of "converting said first derived subject model into a first physical model" and "mapping at least one relationship between said first entity and said second entity of said first plurality of information entities based upon said first physical model." Since Kingberg's system

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starts with a database designer creating an entity-relationship diagram and drives it down to the physical structure of the database, Kingberg must be using only the entity-relationship diagram from which to form a database. Thus, it follows that the other cited passages of Kingberg, i.e., col. 18: lines 43 – 46 and lines 60 – 62, which were cited by the Examiner as teaching Applicant's recited "*converting the first derived subject model into a first physical model*" must also describe Kingberg's entity relationship diagram that is driven down to a physical structure or representation of the data as it is stored in the database. In sum, Kingberg's conventional approach fails to meet recited claim limitations.

Thus Kingberg's conventional approach does not teach, disclose, suggest, or otherwise render the claimed embodiments of the present invention obvious because recited claim elements are not present in Kingberg.

2.   Kingberg actually teaches away

Kingberg's conventional approach not only fails to teach, suggest or disclose the claimed embodiments of the present invention, it clearly teaches away. Kingberg's conventional approach REQUIRES that a database savvy individual custom design the database to work with a particular dataset using an entity-relationship diagram. As the cited passages indicate, the database designer must select entities, relationships, attributes and a primary key for each type: "[i]n developing the entity relationship diagram the application developer identifies entity relationship types and associated attributes and also the primary key for each entity type." (Kingberg, col. 6:lines 47 – 50). Such conventional approaches require significant amount of application engineering effort to be expended up front, often at significant cost and time.

Further, Kingberg's reliance upon a human design expert to input the entity-relationship diagram is inconsistent with the meta model driven approach of the claimed embodiments, in which contemplate modeling information entities using a first logical model, converting the logical model into a derived subject model, converting the derived subject model into a physical model and mapping at least one relationship between a first entity and a second entity of the information entities based upon the physical model.

3.   <u>Kingberg would be rendered inoperable if implemented in a manner suggested by the Examiner.</u>

Kingberg's approach REQUIRES the use of an entity-relationship diagram indicating a layout of information in the database. (Kingberg, column 6, lines 47 - 59). In fact, Kingberg's approach would be rendered inoperable if it were attempted to use Applicant's recited *"first logical model"* of claim 1, in order to implement it. Kingberg's approach simply would not function using abstract models, since such an abstraction does not represent a physical database description that can be provided directly as an input to a Database Description Language (DDL) as Kingberg teaches in col. 18, lines 43 - 46. Kingberg's approach REQUIRES as input a data organization at the level of specificity of an entity-relationship diagram. To suggest otherwise would: (1) require impermissible hindsight, since the system of Kingberg is NECESSARILY configured to use physical database design, such as an entity-relationship diagram as an input; and (2) would render Kingberg unsatisfactory for its intended purpose or change Kingberg's principle of operation (see MPEP § 2143.01).

<u>Conclusion</u>

Therefore, Kingberg does not teach, disclose, suggest or otherwise render obvious the embodiment of claim 1 for at least these reasons. The embodiments recited by claims 10, 18, 20, 28 and 45, while independently patentable, are patentable over Kingberg for at least the same reasons as discussed with regard to claim 1.

Claims 2 through 8, 11 through 17, 19, 21 through 27 and 29 through 35 are dependent claims depending from claims 1, 10, 18, 20 and 28, respectively. Therefore claims 2 through 8, 11 through 17, 19, 21 through 27 and 29 through 35 are patentable over Kingberg for at least the same reasons that claims 1, 10, 18, 20 and 28 are patentable over Kingberg.

Accordingly for at least the foregoing reasons, contrary to the Examiner's assertions, Kingberg not only fails to teach, disclose, suggest or otherwise render obvious elements of the rejected claims, but Kingberg clearly teaches away from the claimed embodiments of the present

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invention as to each of its problem and solution; and would be rendered inoperable if used in the manner asserted by the Examiner. Therefore, Applicant respectfully requests: (1) withdrawal of the rejection and (2) withdrawal of Kingberg from further consideration as a reference in the instant case.

Rejection under 35 U.S.C. § 102(b) over
Fink

On pages 7 through 9 of the Office Action, the Examiner rejected Claims 46 – 50 under 35 U.S.C. § 102(b) as being unpatentable over U.S. Patent No. 6,490,590 to Ronald Fink ("Fink"). Applicant respectfully traverses.

Regarding claim 46, the Examiner asserts that Fink taught: a) retrieving metadata information from a repository (see column 6, lines 7-10 and column 7, lines 4-7), b) creating at least one of the plurality of commands paced upon the metadata information (see column 6, lines 10-18), c) sending at least one of the plurality of commands to a database (see column 5, lines 20-22), d) providing information received from the database responsive to the at least one of the plurality of commands to at least one of the plurality of applications (see column 5, lines 11-19), e) creating at least one of the plurality of reports from a result of the at least one of a plurality of applications (see column 8, lines 2-5). Applicant respectfully disagrees.

1.   Fink fails to teach recited claim limitations.

The Examiner's assertions fail because Fink fails to meet one or more of the recited limitations of the embodiment of claim 46, at least with regard to *"retrieving metadata information from a repository"*, *"creating at least one on a plurality of commands based upon said metadata information"*, *"sending said at least one of a plurality of commands to a database"*, *"providing information received from said database responsive to said at least one and a plurality of commands to at least one of a plurality of applications"*, and *"creating at least one of a plurality of reports from a result of said at least one of a plurality of applications."*

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For example, the Examiner has cited to step in 304 and column 6, lines 10-18 of Fink for teaching the recited *"creating at least one on a plurality of commands based upon said metadata information"* of claim 46. It appears that Fink has it backwards. Rather then generating commands for a database from metadata, the cited passages appear to indicate creating object-oriented utility routines to support utility metadata. As stated in Fink, column 6, lines 7-18:

> During execution of step 304, the DIA determines the utility metadata, including extraction, loading, transformation, cleansing, and householding metadata, from a set of predefined object-oriented utility routines. At this point the DIA identifies additional utility metadata required but not present in the predefined set. As additional utility metadata is identified, the DIA can create and head object-oriented utility routines to support the utility metadata to this set of predefined routines. During step 304, the utility routines for extracting, loading, cleansing, transforming, and householding metadata are tested and verified usable in the database management system. (Fink, col. 6, lines 7 – 18, emphasis added.)

The cited step 304 and passage from the specification, however, appear to indicate instead a step of using predefined object-oriented utility routines in order to determine utility metadata. As stated by Fink, "during step 304, the utility routines for extracting, loading, cleansing, transforming, and householding metadata are tested and verified usable in the database management system." Fink's utility routines are for manipulating the metadata, and not intended to be addressed to the database in order to perform database commands. Thus, the cited passages of Fink do not teach Applicant's claim 46: *"creating at least one on a plurality of commands based upon said metadata information"*, *"sending said at least one of a plurality of commands to a database"*, *"providing information received from said database responsive to said at least one and a plurality of commands to at least one of a plurality of applications."*

The Examiner also cites column 8, lines 2-5 of Fink for teaching the recited, *"creating at least one on a plurality of reports from a result of said at least one of a plurality of applications"* recited by claim 46. The cited passage of Fink is as follows:

> If the database management system is not electronically connected to the data sources, a data movement list is generated for the DIA's used in initiating the data movement activities.

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The cited passage appears, however, to indicate listings of data sources and destinations of data movements in a database system rather than the, *"creating at least one on a plurality of reports from a result of said at least one of a plurality of applications"* recited by claim 46.

2.   Fink actually teaches away

Not only does Fink fail to teach, disclose, suggest or otherwise render obvious claim 46 obvious, Fink actually teaches away from the claimed embodiment of claim 46. Fink teaches away from the claimed embodiments of the invention because as noted in step 302, Fink REQUIRES **business rule metadata**. The Examiner infers that Fink teaches creating metadata information in step 302 and saving the metadata information in a repository in step 308, and that these cited steps teach Applicant's recited *"creating at least one on a plurality of commands based upon said metadata information."* Not all metadata is created equal, however, and the cited Step 302 of Fink refers to **business rule metadata**. Further, even ignoring this critical difference, Fink's saving **business rule metadata** into a repository does not teach, disclose, nor even suggest the claimed *"creating at least one on a plurality of commands based upon said metadata information."* In sum, Fink's approach is centered about (1) generating and storing **business rule metadata**; and (2) using extraction and loading routines and data description language (DDL) to construct a data warehouse from a physical data design (PDD). (Fink, Abstract). Thus, Fink fails to teach, disclose, suggest or otherwise even render obvious the claimed embodiment of claim 46.

3.   Fink would be rendered inoperable if implemented in the manner suggested by the Examiner.

Not only does Fink's approach lack Applicant's claimed techniques, Fink's (1) reliance upon business rule metadata; and (2) use of conventional data description language to construct a data warehouse indicate that Fink likely would be rendered inoperable if it were applied to Applicant's techniques in the manner suggested by the Examiner.

Thus, Fink cannot render the embodiments of claim 46 obvious. To suggest otherwise would be impermissible hindsight. Fink further cannot be combined with any other references with regard to rendering the recited embodiments obvious, since to do so would be "undesirable" according to Fink's teachings, would likely render Fink inoperable and would require a very substantial change to Fink's principle of operation (see MPEP § 2143.01).

Conclusion

Therefore, Fink does not teach, suggest or disclose the claimed embodiment of claim 46 for at least these reasons. The embodiments recited by claims 48 – 50, while independently patentable, are patentable over Fink for at least the same reasons as discussed with regard to claim 46.

Claim 47 is a dependent claim depending from claim 46. Therefore claim 47 is patentable over Fink for at least the same reasons that claim 46 is patentable over Fink. ·

Accordingly, for at least the foregoing reasons and contrary to the Examiner's assertions, · Fink not only fails to teach, suggest or render obvious elements of the rejected claims, but Fink teaches away from the claimed embodiments of the present invention as to each of its problem and solution; and would be rendered inoperable if used in the manner asserted by the Examiner. Therefore, Applicant respectfully requests: (1) withdrawal of the rejection and (2) withdrawal of Fink from further consideration as a reference in the instant case.

Rejection under 35 U.S.C. § 103(a) over
Kingberg in view of OLAP Council

In items 4 on pages 9 - 10 of the Office Action, the Examiner rejected claims 5, 14, 24 and 32 under 35 U.S.C. § 103(a) as being unpatentable over Kingberg in view of "The OLAP COUNCIL, OLAP and OLAP Server Definitions," published by the OLAP Council, Copyright 1995. ("OLAP Council Publication"). Applicant respectfully traverses.

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Regarding claims 5, 14, 24 and 32, the Examiner admits that Kingberg does not specifically teach applications comprising at least one of statistics, a report generator, and Online Analytical Processing (OLAP) package, and data mining application as recited in claims 5, 14, 24 and 32 (which depend from claims 1, 10, 20 and 28, respectively). The Examiner asserts that the OLAP Council Publication teaches applications comprising at least one of statistics, a report generator, and online analytical processing (OLAP) package, and data mining application (see pages 1-8).

The Examiner argues that it would have been obvious to one of ordinary skill in the art at the time the invention was made to combined the teachings of Kingberg with the teachings of the OLAP Council Publication, in which users gain insight into the meaning of data contained in a database by using OLAP multidimensional analysis. The Examiner states that the motivation to make this combination is that multidimensional structure is arranged so that every data item is located and accessed based on the intersection of the dimension members which to find that item. The Examiner states that OLAP functionality is characterized by dynamic multidimensional analysis of consolidated enterprise data supporting end-user analytical and navigational activities.

Applicants respectfully disagree.

Since claims 5, 14, 24 and 32 depend from claims 1, 10, 20 and 28, respectively, Kingberg, the OLAP Council Publication, or the asserted combination thereof, cannot render the embodiments recited by claims 5, 14, 24 and 32 obvious if Kingberg, the OLAP Council Publication, or the asserted combination thereof do not render obvious claims 1, 10, 20 and 28, respectively.

Summary

Applicant has already shown Kingberg's failings to teach, suggest, or even render the claimed embodiments of the present invention obvious, either alone or in any combination with other references. The asserted combination of Kingberg and the OLAP Council Publication also fails to render the claimed embodiments of the present invention obvious for at least the same reasons as noted above with regard Kingberg. In addition, the OLAP Council Publication fails to

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render the claimed embodiments obvious because: (1) the OLAP Council Publication fails to remedy any of the deficiencies of Kingberg in regard to rendering the claimed embodiments obvious; (2) each of Kingberg and the OLAP Council Publication fail to suggest a motivation to be combined and indeed cannot be combined; (3) the OLAP Council Publication fails to remedy Kingberg's deficiencies with regard to being rendered (a) inoperable; or (b) unsatisfactory for its intended purpose; or (c) suffering a change in its principle of operation if used in the manner argued by the Examiner; and (4) each of Kingberg and the OLAP Council Publication teach away from the claimed embodiments of the present invention as to each of its problem and solution.

1.   <u>The OLAP Council Publication fails to remedy any of the deficiencies of Kingberg in regard to rendering the claimed embodiments obvious.</u>

Even in the unlikely event that someone were able to combine any of the statistics, report generator, online analytical processing (OLAP) package, or data mining applications of the OLAP Council Publication with Kingberg's relational database, a task neither suggests, the result would still fail to render the claimed inventions obvious. The OLAP Council Publication fails to teach the recited elements of the claimed embodiments of the present invention, particularly in regard to the deficiencies of Kingberg, at least with regard to, *"modeling a first plurality of information entities, including a first entity and a second entity, using a first logical model"*, *"converting said logical model into a first derived subject model"*, *"converting said first derived subject model into a first physical model"* and *"mapping at least one relationship between said first entity and said second entity of said first plurality of information entities based upon said first physical model."* The OLAP Council Publication fails remedy any of Kingberg's deficiencies to teach, suggest or otherwise render obvious these recited elements of the claimed embodiments of Applicant's invention.

2.   <u>Kingberg and the OLAP Council Publication fail to suggest a motivation to be combined and cannot be combined.</u>

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The OLAP Council Publication cannot be combined with Kingberg in the manner suggested by the Examiner. A reasonable expectation of success is required to combine references (MPEP § 2143.02). In contrast to Kingberg, which employs relational database technology, OLAP REQUIRES a multidimensional aggregation of data in order to provide quick access to information for further analysis. Kingberg's relational database technology is actually incompatible with, and not combinable with, the OLAP Council publication's multidimensional aggregation techniques. Accordingly, Examiner's argument that Kingberg can be combined with the OLAP Council Publication, because the latter teaches report generation tools, to render the embodiments of claims 5, 14, 24 and 32 obvious fails.

3. The asserted combination of Kingberg with the OLAP Council Publication fails to remedy Kingberg's deficiencies with regard to being rendered inoperable or unsatisfactory for its intended purpose and changes Kingberg's principle of operation.

Even if, arguendo, it were even possible to make the Examiner's asserted combination of the OLAP Council Publication multidimensional aggregation technique and the Kingberg relational database, the resultant combination would be inoperable because, as shown previously, Kingberg NECESSARILY REQUIRES an input of a database level data organization description which can be expressed in the form of an entity-relationship diagram. To suggest otherwise, i.e., that Kingberg's deficiencies of requiring a database-level design to be specified as input could be remedied by the use of an OLAP report generation techniques would: (1) require impermissible hindsight, since the system of Kingberg is NECESSARILY configured to use data organization specifications as an input; and (2) would render Kingberg unsatisfactory for its intended purpose or change Kingberg's principle of operation (see MPEP § 2143.01).

4. The asserted combination of Kingberg with the OLAP Council Publication teaches away.

Because Kingberg NECESSARILY REQUIRES the use of a data model configured to the physical organization of a database as input, such as an entity-relationship diagram, Kingberg

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teaches away from the use of abstraction modeling techniques recited by the claimed embodiments. Further, Kingberg's approach NECESSARILY REQUIRES that a database designer must select entities, relationships, attributes and a primary key for each type, "[i]n developing the entity relationship diagram the application developer identifies entity relationship types and associated attributes and also the primary key for each entity type." (Kingberg, col. 6:lines 47 – 50). The OLAP Council publication also teaches away. The OLAP Council publication necessarily requires multidimensional data aggregations to be conceptualized as cubes. Applicant's techniques, however, do not have such limitations.

The OLAP Council Publication fails to remedy the deficiencies of Kingberg in teaching away, and teaches away from the claimed embodiments as well. The OLAP Council Publication teaches data analysis such as applying analytical operations such as ratios, cumulative totals and trend analyses. Even if the OLAP Council Publication's data analysis methods could be combined with Kingberg's approaches, nothing in the OLAP Council Publication, or the asserted combination with Kingberg, can remedy the noted flaws of Kingberg.

Accordingly, for at least the foregoing reasons, contrary to the Examiner's assertions, Kingberg and the OLAP Council Publication, alone or in any combination, fail to render the embodiments of claims 1, 10, 20 and 28, obvious. Therefore, Kingberg and OLAP Council Publication or any combination thereof, fail to render the embodiments of claims 5, 14, 24 and 32, which depend from claims 1, 10, 20 and 28, obvious for at least the foregoing reasons.

Accordingly, Applicant respectfully requests: (1) withdrawal of the rejections and (2) withdrawal of each of Kingberg and the OLAP Council Publication from further consideration as references in the instant case.

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Rejection under 35 U.S.C. § 103(a) over

Kingberg in view of Fink

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In item with 4 on pages 11 - 16 of the Office Action, the Examiner rejected claims 6, 9,
15, 25, 33, 36-38, and 40-44 under 35 U.S.C. § 103(a) as being unpatentable over Kingberg in
view of Fink. Applicant respectfully traverses.

Regarding claims 6, 15, 25, 33, and 40, the Examiner admits that Kingberg does not
specifically teach creating metadata information for the models and saving the metadata
information in a repository as recited in claims 6, 15, 25, 33, and 40 (which depend from claims
1, 10, 20 and 28, respectively). The Examiner asserts that Fink teaches creating metadata
information for the models (Fig. 3A, Step 302) and saving the metadata information in a
repository (Fig. 3A, Step 308). The Examiner argues that it would have been obvious to one of
ordinary skill in the art at the time the invention was made to combine the teachings of
Kingsburg with the teachings of Fink, in which metadata information is saved in a repository
when the processor maps at least one relationship between the first and the and the second entity
of the first plurality of information entities based upon the first physical model. The Examiner
states that the motivation to combine Kingberg with Fink is that as additional metadata is
identified, object-oriented utility routines to support the metadata created are added to the set of
predefined routines.

Applicants respectfully disagree.

Since claims 6, 15, 25, 33, and 40 depend from claims 1, 10, 20, and 28, respectively,
Kingberg, Fink, or the asserted combination thereof, cannot render the embodiments recited by
the claims 6, 15, 25, 33, and 40 obvious if Kingberg, Fink, or the asserted combination thereof
do not render obvious claims 1, 10, 20, and 28, respectively.

Applicant has already shown Kingberg's failings to teach, suggest, or even render the
claimed embodiments of the present invention obvious, either alone or in any combination with
other references. The asserted combination of Kingberg and Fink also fails to render the claimed
embodiments of the present invention obvious for at least the same reasons as noted above with
regard to the OLAP Council Publication. Fink fails to render the claimed embodiments obvious
because: (1) Fink cannot be combined with Kingberg because the cited Step 302 of Fink refers to

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business rule metadata, and Kingberg does not: (a) refer to metadata at all, nor (b) indicate the use of a business rule from which the business rule metadata of Fink could be derived; (2) Fink fails to remedy any of the deficiencies of Kingberg in regard to rendering the claimed embodiments obvious; (3) Fink fails to remedy Kingberg's deficiencies with regard to being rendered (a) inoperable; or (b) unsatisfactory for its intended purpose; or (c) suffering a change in its principle of operation if used in the manner argued by the Examiner; (4) each of Kingberg and Fink fail to suggest a motivation to be combined; and (5) each of Kingberg and Fink teach away from the claimed embodiments of the present invention as to each of its problem and solution.

Fink cannot be combined with Kingberg in the manner suggested by the Examiner. A reasonable expectation of success is required to combine references (MPEP § 2143.02). The Examiner argues that Fink teaches creating metadata information in step 302 and saving the metadata information in a repository in step 308, and that these cited steps could be combined with Kingberg to render the claimed embodiments obvious. Not all metadata is created equal however. The cited Step 302 of Fink refers to **business rule metadata**. Not only does Kingberg not refer to metadata at all, Kingberg does not even indicate the use of a **business rule** from which the **business rule metadata** of Fink could be derived. In other words, Fink's business rule metadata is incompatible with Kingberg's purpose. The two references cannot be combined. Kingberg lacks the business rule from which Fink could derive his business rule metadata.

Even in the unlikely event that someone were able to combine Fink's business rule metadata with Kingberg's relational database, a task neither one suggests, the result would still fail to render the claimed inventions obvious. Fink fails to teach the recited elements of the claimed embodiments of the present invention, particularly in regard to the deficiencies of Kingberg, at least with regard to, *"modeling a first plurality of information entities, including a first entity and a second entity, using a first logical model"*, *"converting said logical model into a first derived subject model"*, *"converting said first derived subject model into a first physical model"* and *"mapping at least one relationship between said first entity and said second entity of said first plurality of information entities based upon said first physical model."* Fink fails to

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remedy any of Kingberg's deficiencies to teach, suggest or otherwise render obvious these recited elements of the claimed embodiments of Applicant's invention.

Therefore, the asserted combinations of Kingberg and Fink do not teach, suggest or otherwise render obvious the claimed embodiments of claims 1, 10, 20, and 28 for at least these reasons. Thus, the asserted combinations of Kingberg and Fink do not teach suggest or otherwise render obvious the claimed embodiments of claims 6, 15, 25, 33, and 40, which depend from claims 1, 10, 20 and 28, respectively.

Further, the embodiments recited by independent claims 9, 36, 37 and 41 – 44, while independently patentable, are patentable over the asserted combinations of Kingberg and Fink for at least the same reasons as discussed with regard to claims 6, 15, 25, 33, and 40.

Accordingly, Applicant respectfully requests: (1) withdrawal of the rejections and (2) withdrawal of each of Kingberg and Fink from further consideration as references in the instant case.

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Rejection under 35 U.S.C. § 103(a) over
Kingberg in view of Fink and further in view of OLAP Council

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In item with 4 on page 17 of the Office Action, the Examiner rejected claim 39 U.S.C. § 103(a) as being unpatentable over Kingberg in view of Fink and further in view of OLAP Council. Applicant respectfully traverses.

Regarding claim 39, the Examiner admits that Kingberg or Fink do not explicitly teach applications comprising at least one of statistics, a report generator, and online analytical processing (OLAP) package, and a data mining application. The Examiner asserts, however, that OLAP teaches applications comprising of at least one of statistics, a report generator, and online analytical processing (OLAP) package, and a data mining application (see pages 1-8). The Examiner argues that it would have been obvious to one of ordinary skill in the art at the time the

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PAGE 22/30 * RCVD AT 1/9/2004 4:49:36 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/6 * DNIS:8729306 * CSID:4084141076 * DURATION (mm-ss):08-48

invention was made to combine the teachings of Kingberg and Fink with the teaching of all that wherein users gain insight into the meaning contained in the information of a database by using OLAP objective of multidimensional analysis. The Examiner states that the motivation for making such a combination is that a multidimensional structure is arranged so that every data item is located and access thereto is based on the intersection of the dimension members that defined that item. The Examiner states that OLAP functionality is characterized by dynamic multidimensional analysis of consolidated enterprise data supporting end user analytical and navigational activities.

Applicant respectfully disagrees.

Applicant has shown the failings of Kingberg, Fink and the OLAP Council Publication to teach, disclose, or even suggest, or otherwise render obvious the claimed embodiments of the present invention. Nothing in the asserted combination of Kingberg, Fink and the OLAP Council Publication can remedy the deficiencies of any one of these references, or any one of various combinations of these references to teach, disclose, suggest, or otherwise render obvious the claimed embodiments of the present invention.

Accordingly, for at least the foregoing reasons, contrary to the Examiner's assertions, Kingberg, OLAP Council Publication and Fink, alone or in any combination, fail to teach, suggest, disclose or otherwise render the embodiments of claim 39 obvious. Kingberg, OLAP Council and Fink, or any combination thereof, not only fail to render obvious the claimed embodiments, but further, teach away from the claimed embodiments of the present invention as to each of its problem and solution. Accordingly, Applicant respectfully requests: (1) withdrawal of the rejection; and (2) withdrawal of each of Kingberg, OLAP Council and Fink from further consideration as references in the instant case.

Conclusion

Because each of the cited references, Kingberg, OLAP Council Publication and Fink or any combination thereof, fail to teach, suggest or render obvious, and teach away from, the

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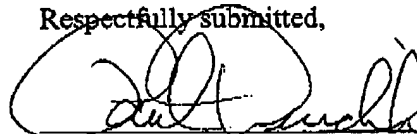Appl. No. 09/827,969

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claimed embodiments recited by claims 1 - 50, Applicant respectfully requests: (1) withdrawal of the rejections and (2) withdrawal of each of Kingberg, OLAP Council Publication and Fink from further consideration as references in the instant case.

For at least the reasons set forth above, Applicant respectfully submits that all pending claims are patentable over the art of record, including the art cited but not applied. Accordingly, timely allowance of all claims is hereby respectfully solicited.

Applicant encloses herewith a petition for extension of time to respond for two months and the applicable extension fee. The Commissioner is authorized to charge any fee that may be due in relation to this application to the Credit Card Payment Account indicated in the enclosed PTO-2038 form.

If the Examiner has any questions or needs any additional information, the Examiner is invited to telephone the undersigned attorney at 408-414-1209. (EST -3hrs).

Respectfully submitted,

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